

#### AUTONOMY FOR ROBOTS

AI Kits and Robotic Outdoor Navigation





## Company

ARTI — Autonomous Robot Technology GmbH

Autonomy for robots

Founded in early 2019 with 6 shareholder High-Tech Start-Up from Austria Spin-off of the Graz University of Technology Employees: 15 Customers across Europe Research projects to increase the quality of our products and services Offices in Graz, Styria (Austria)

Embedded in industrial and high-tech network

Excellent connections to universities and research institutions

Excellent transportation links and a central location within Europe

Science Park The High Tech Incubator Graz

- Incubated in 2017



- Incubated since 2018



business incubation

centre

Austria

ARTI is an Alumnus of ESA Business Incubation Centre Austria 2023

- Incubated in 2021





# **Problem: Automation vs Adaption**

Even though different robots require similar parts, complexity is increasing

We distinguish between applications directly on the robot (Edge) and the ecosystem (Env) in which they operate







# Al Kits



Mapping and Localization



**Environment Perception** 



Fleet Management



Routing and Planning



Obstacle Avoidance



Simulation









### Explore

your idea from the very start with us. Create design strategies and prototypes for high-quality yet cost-efficient solutions.



Create

a consumer ready product. Achieved with well-engineered and extensively tested software components.



#### Improve

existing solutions with our expert knowledge. Work together to exploit the maximum potential of your product.



### Support

your decision with expert advice. Benefit from an external opinion and solid experience in autonomous products.





Larson, bicycle

areas is complex...







### Space Technology: Skill Planning and Roadmap Planning







(1) Skill Planner

(2) Roadmap Planner



# Roadmap Design









# Satellite to Roadmap



Step 1 and 2

Step 3

Satellite Image segmentation depending on robot capabilities

Generating nth routes. Taking robot and task in account (save vs. fast vs. reliable)

## Step 4 and 5 Planning on roadmap and avoid local obstacles (roadmap coloured in red)



# Usage Scenarios in Urban Environment



- Different use cases can be tackled with the same solution.
- Low integration effort high value output!





## Get in Touch

- A simple conversation can answer a lot of questions.
- So don't hesitate to get in touch!

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Parthers



8